

***Amendments to the Claims***

The listing of claims will replace all prior versions, and listings of claims in the application.

1-39. (canceled)

40. (currently amended) An isolated DNA molecule comprising:

(a) DNA encoding an OmpA signal peptide;

(b) DNA encoding a tPA or K2S molecule peptide selected from the group consisting of tPA, a tPA variant, K2S, and a K2S variant;

(c) DNA encoding a peptide selected from the group consisting of SEGN (SEQ ID NO:9) and SEGNSD (SEQ ID NO:10);

wherein said DNA of (a) is located upstream of said DNA of (c),

and said DNA of (b) is located downstream of said DNA of (c);

wherein said DNAs of (a), (b), and (c) are operably linked; and

wherein a prokaryotic host cell transformed with said DNA

molecule secretes said tPA or K2S molecule, tPA variant, K2S, or K2S variant, extracellularly as a thrombolytically active protein.

41. (previously presented) The isolated DNA molecule of claim 40, wherein the OmpA signal peptide is encoded by the sequence of SEQ ID NO:3.

42. (previously presented) The isolated DNA molecule of claim 40, wherein

43. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (c) is TCTGAGGGAAACAGTGAC (SEQ ID NO:1).

44. (canceled)

45. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (b) is SEQ ID NO:4.

46. (currently amended) The isolated DNA molecule of claim 40, wherein said DNA of (b) encodes a K2S variantmolecule selected from the group consisting of SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, and SEQ ID NO:18.

47. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (b) encodes amino acids at least 90% identical to amino acids 87 - 527 of SEQ ID NO:19.

48. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (b) encodes amino acids at least 90% identical to amino acids 174 - 527 of SEQ ID NO:19.

49. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (b) encodes amino acids at least 90% identical to amino acids 180 - 527 of SEQ ID NO:19.

50. (previously presented) The isolated DNA molecule of claim 40, wherein said DNA of (b) encodes amino acids at least 90% identical to amino acids 220 - 527 of SEQ ID NO:19.

51. (currently amended) The isolated DNA molecule of claim 40, wherein said DNA molecule of (b) hybridizes under stringent conditions to a DNA molecule consisting of SEQ ID NO:4, wherein the hybridization is carried out in 6x SSC, 5x Deinhardt's solution, and 0.1% SDS[%] at 65°C followed by a washing step in 0.2 SSC, 0.01% SDS at 65°C.

52. (previously presented) A vector comprising the DNA molecule of claim 40.

53. (previously presented) The vector of claim 52, further comprising the DNA sequence of a ribosome binding site and of the lac promoter.

54. (previously presented) The vector of claim 53, further comprising the DNA sequence of the  $\beta$  lactamase gene.

55. (previously presented) The vector of claim 54, further comprising the DNA sequence of the gpIII gene.

56. (previously presented) The vector of claim 55, wherein the expression of the gpIII protein is suppressed or inhibited by deleting the DNA molecule encoding said gpIII protein or by a stop codon between the gene coding for the functional variant of tissue plasminogen activator protein and the gpIII protein.

57. (canceled)

58. (previously presented) A prokaryotic host cell comprising the DNA molecule of claim 40.

59. (previously presented) The host cell of claim 58, wherein said host cell is *E. coli*.

60. (previously presented) A method of producing a vector comprising inserting the DNA molecule of claim 40 into a vector.